<u>REMARKS/ARGUMENTS</u>

The office action of December 23, 2004 has been carefully reviewed and these remarks are responsive thereto. Claims 6, 8-12, 14, 17, 29-32, and 34-42 have been amended, and new claims 43-46 have been added. Claims 1-46 remain pending in this application after entry of this amendment. Reconsideration and allowance of the instant application are respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 1-5, 7, and 29-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Martino, II (U.S. Pat. No. 5,680,551, hereinafter Martino). This rejection is respectfully traversed, based on the arguments set forth below.

Independent claim 1 recites, *inter alia*, "wherein each message is routed based on an arbitrary portion of the message's contents; and an interface through which application programs communicate with the message dispatcher to define the arbitrary portion of the message's contents." Martino, however, does not teach or suggest the routing of messages based on an arbitrary portion of the message's contents, nor does Martino teach or suggest an interface through which application programs communicate with the message dispatcher to define the arbitrary portion of the message's contents.

Martino only describes an electronic messaging system that formats a message for transfer by building a message header, called the Interface Control Block (ICB), which identifies the ultimate destination of the message. Martino, col. 8, lines 17-34. Martino describes subsequent routing and delivery of the message based on the ultimate destination identified in the ICB. While Martino discusses encapsulation based on the specific protocol used to send the message (col. 10, lines 25-37), this does not teach or suggest routing the message based on an arbitrary portion of the message's contents. Martino does describe routing based on a class of service (col. 10, lines 48-59), but this also does not teach or suggest routing the message based on an arbitrary portion of the message's contents, as recited in claim 1. At no point does Martino describe or suggest that a message can be routed based on any other field other than the ultimate destination or a class of service, much less based on an arbitrary portion of the message's content. Indeed, Martino even teaches away from routing based on an arbitrary portion of a message by stating "[t]he programmer

will be concerned *only* with the fields that specify message handling and end-to-end logical addressing in the Interface Control Block (ICB) portion 4' of the EMH." Martino, col. 10, lines 61-64 (emphasis added). Martino thus teaches ignoring the remaining fields, whereas the presently claimed invention recites that a message can be routed based on an arbitrary portion of the message's contents (i.e., any field).

In addition, Martino does not teach or suggest an interface through which an application program communicates to define the arbitrary portion of the message's contents by which the message is routed. That is, Martino does not teach or suggest that an application program chooses the arbitrary portion of a message's contents by which the message is subsequently routed. As stated above, Martino performs all routing based on the ultimate destination defined in the ICB, possibly in combination with a class of service, not on an arbitrary portion of the message's contents, as recited in claim 1. Thus, the office action has not established a *prima facie* case of obviousness as to claim 1.

Claims 2-5 and 7 are allowable for at least the same reasons as base claim 1 as well as based on the additional features recited therein. For example, with respect to claim 3, the office action does not establish a *prima facie* case of obviousness because the Office Action does not address all recitations of the claim. While the Office Action alleges that Martino teaches first/second network messages, first/second attribute of said first/second message, and a first/second network, the Office Action does not identify any reference that teaches or suggests *routing* a first network message based on a first attribute of said first network message, and *routing* a second network message based on a second attribute, different from said first attribute, of said second network message, as recited in claim 3 (emphasis added).

With respect to claim 4, the Office Action does not establish a *prima facie* case of obviousness because the Office Action does not address all recitations of the claim. While the Office Action again alleges that Martino teaches first/second network messages, first/second attribute of said first/second message, a first/second network, the Office Action fails to address the recitation wherein the message dispatcher *routes* a first network message, addressed to a recipient from a first sender, to a first server, and wherein the message dispatcher *routes* a second

network message, addressed to the recipient from a second sender, to a second server, as recited in claim 4.

With respect to claim 7, Martino does not teach or suggest that the arbitrary portion of the message's contents (by which the message is routed, as per base claim 1) is an application level header. Indeed, at col. 8, lines 17-20, Martino describes a network layer header. At col. 9, lines 20-25, Martino describes inserting application level data into a network layer header, and then routing based on the network layer header. At col. 10, lines 28-31, Martino merely describes encapsulation, not routing a message based on an application header in the message's contents.

Independent claim 29 describes, *inter alia*, "storing routing information received from a network application, wherein the routing information comprises a message field, a field condition, and a routing instruction; ... and when the received message's message field meets the field condition, performing the routing instruction." Martino, however, does not receive routing information from a network application, i.e., from an application sending and receiving communications across a network.

Claims 6, 8-28 and 32-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Martino in view of Narisi *et al.* (U.S. Pat. No. 6,233,619 B1, hereinafter Narisi). This rejection is respectfully traversed, based on the arguments set forth below.

As to all of claims 6, 8-28 and 32-42, Applicant respectfully submits that there is no motivation or suggestion to combine Martino and Narisi. While Martino and Narisi both pertain to communication between heterogeneous computer systems, Narisi explicitly teaches away from Martino. More specifically, *Narisi is for use with non-TCP/IP systems*. Narisi states, at col. 7, lines 36-46, that the system of Narisi is directed to methods and system for use between two directly interconnected computer systems to communicate over the interconnection *"rather than over conventional network communication paths such as TCP/IP and Ethernet."* (emphasis added). Martino, on the other hand, describes a system for use with the TCP/IP protocol stack. Martino, col. 3, lines 15-21. Thus, Narisi actually teaches away from a combination with Martino, and there is thus no motivation or suggestion to combine Martino with Narisi.

In addition to the above, dependent claim 6 is allowable for at least the same reasons as base claim 1 as well as based on the additional features recited therein. That is, neither Martino nor Narisi teach or suggest a transport adapter that converts messages between a transport layer protocol and a virtual network protocol.

Independent claim 8 recites, *inter alia* (in amended form), a data processing apparatus comprising "stored rules instructing the message dispatcher to route a first network message based on a first arbitrary attribute of said first network message, and route a second network message based on a second arbitrary attribute, different from said first arbitrary attribute, of said second network message, wherein the first and second arbitrary attributes are selected from a set of headers and data contained in each network message." As with independent claim 1, Martino does not teach or suggest the routing of messages based on arbitrary message contents. Narisi does not cure this deficiency, even if Narisi is combined with Martino.

Dependent claims 9-16 are allowable for at least the same reasons as amended base independent claim 8 as well as based on the additional features recited therein. For example, with respect to claim 11, neither Martino nor Narisi teach or suggest a first message handler that, upon the occurrence of a predetermined condition, alters a second message handler. Martino, at col. 9, lines 10-14, describes memory allocation associated with message control defaults. Martino does not teach or suggest a first message handler that, upon the occurrence of a predetermined condition, alters a second message handler, as recited in claim 11.

Neither Martino nor Narisi teach or suggest the features of claim 14. Martino, at col. 20, lines 34-41, describes retrying a message until a message expiration time occurs, not a first message handler that, upon the occurrence of a predetermined condition, alters a second message handler, wherein the predetermined condition comprises the nonoccurrence of receiving poll responses from a second apparatus for a predetermine amount of time.

Independent claim 17 recites, *inter alia*, "the first and second attributes [on which routing is based] may be any field selected from a set of headers and data of each network message." However, Martino describes routing messages based on only specific fields, i.e., ultimate destination or class of service.

Dependent claims 18-28 are allowable at least for similar reasons as claim 17, as well as based on the additional features recited therein. For example, with respect to claim 21, neither Martino nor Narisi teach or suggest that each message is output to a transport adapter that converts the message from a virtual network protocol to a transport protocol.

Independent claim 32 recites, *inter alia*, a computer network comprising a plurality of computers, each computer having "a message dispatcher that routes and dispatches messages based on an arbitrary portion of the message's contents." As discussed above, Martino does not teach or suggest routing based on an arbitrary portion of the message's contents, and Martino and Narisi can not be properly combined.

Dependent claim 33 is allowable at least for the same reasons as claim 32, as well as based on the additional features recited therein.

Independent claim 34 recites, *inter alia*, "at least one virtualized component inserted between layer 7 and layer 6 of an OSI protocol stack, wherein said virtualized component provides a virtual network service." Neither Martino nor Narisi teaches or suggests the insertion of a virtual network component between an application layer (layer 7) and presentation layer (layer 6). In addition, contrary to the allegation in the office action, the cited references do not teach or suggest the recited features of any of dependent claims 36-42. At the cited portions of Martino, the document merely discusses background information, and does not provide any details regarding virtualized components comprising any additional modules.

New Claims

Applicants have added new claims 43-46, supported by the original specification as filed. No new matter has been added.

CONCLUSION

All rejections having been addressed, applicant respectfully submits that the instant application is in condition for allowance, and respectfully solicits prompt notification of the same. However, if for any reason the Examiner believes the application is not in condition for
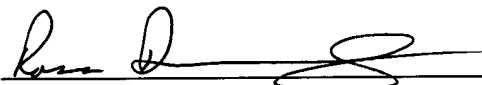
allowance or there are any questions, the examiner is requested to contact the undersigned at (202) 824-3153.

Respectfully submitted,

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Dated this 23 day of March, 2005   By:

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